



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,524	03/08/2004	Chia-Shang Chen	14281 B	1966
23595	7590	10/19/2006	EXAMINER	
NIKOLAI & MERSEREAU, P.A. 900 SECOND AVENUE SOUTH SUITE 820 MINNEAPOLIS, MN 55402			MURALIDAR, RICHARD V	
		ART UNIT	PAPER NUMBER	
		2838		

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

X

Office Action Summary	Application No.	Applicant(s)	
	10/796,524	CHEN, CHIA-SHANG	
	Examiner Richard V. Muralidhar	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 July 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin [U.S. 2002/0154527], or in the alternative, under 35 U.S.C. 103(a) as obvious over Lin in view of Tortola et al. [U.S. 5160879].

With respect to Claim 1, [amended] Lin teaches a charger [par. 0002 mobile AC/DC charger] comprising: a main body [Fig. 1 enclosure 1] and a cell chamber disposed in the main body [see below], the main body having a charging electric circuit [Fig. 2 regulation circuit 21] connected to three different types of input power terminals including an alternating current power source terminal [Fig. 1 AC prong 211 supplying AC], a direct current power source terminal [Fig. 1 the right side terminal of the two terminals indicated by input connector 223], and a cell power source terminal [Fig. 1 the left side terminal of the two terminals indicated by input connector 223] wherein the alternating current power source terminal, the direct current power source terminal, and the cell power source terminal are integrated on the main body [Fig. 1, all three of these terminals are integrated onto the main body 1], each of the alternating current

power source terminal, the direct current power source terminal, and the cell power source terminal is provided on the main body [all three terminals are provided on the main body of enclosure 1] and is connected to a corresponding terminal of the charging electric circuit of the main body independently and respectively [Fig. 3, the AC prong 211 is connected to the charger circuitry via L/N terminal board 211; the right side terminal of the two terminals indicated by input connector 223 is connected to the charger circuitry via the positive terminal shown for terminal board 223; and the left side terminal of the two terminals indicated by input connector 223 is connected to the charger circuitry via the negative/grounded terminal shown for terminal board 223].

With respect to the *cell chamber* limitation of claim 1, Lin teaches a 9-volt battery 221 shown in Fig. 1, that must partially be inserted beyond the outer perimeter of enclosure 1 in Fig. 1 to make contact with the electrical terminals 223 on internal circuit PCB 2, that duplicates the applicant's intended purpose exactly. If the battery 221 were not inserted at least some distance into enclosure 1, it would likely fall off of terminal 223 once attached. Therefore this inner insertion space is considered the cell chamber. Also, considering that 9-volt batteries are typically used on the inside of devices to provide power, it is well within the scope of Lin's invention to completely relocate the 9-volt battery 221 to the inside of the charger enclosure 1 for the purposes of advancing the charger's mobility and enhancing charging functionality. As an alternative, where this does not meet the cell chamber limitations;

Tortola teaches a charger [Fig. 1 power pack 10, col. 1 lines 51-53] comprising: a main body [Fig. 1, comprising top 12 and bottom 14] and a cell chamber [Fig. 5 the

chamber containing batteries 48] disposed in the main body and means for charging the internal batteries.

Lin and Tortola are analogous portable device battery chargers that use AC and DC. At the time of the invention, it would have been obvious to one of ordinary skill in the art to add the internal battery of Tortola's charger to Lin for the benefit of having a secondary source of power [DC] that does not require a vehicle's cigarette port or AC wall outlet to recharge portable devices. This is particularly advantageous when one is away from both vehicle cigarette ports and wall outlets, which is often the case in movie theatres, shopping malls, etc.

With respect to Claim 2, [amended] Lin teaches an electric power source plug [Fig. 1 AC plug 211] integrally formed on and protruded outwardly from a bottom of the main body is used as the alternating current power source terminal [Fig. 1, when the AC plug 211 is swung to the ready position, it will protrude outwards. Top and bottom orientations are relative only in Lin's invention, as either designation would apply equally depending on how the user plugged the device into the outlet].

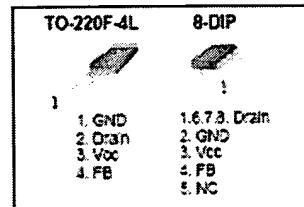
With respect to Claim 3, [amended] Lin teaches a cigarette ignition plug [Fig. 1 cigarette plug 222] integrally formed on and protruded outwardly from [cigarette plug 222 is both integral with and shown in Fig. 1 as protruding outwardly from] a rear portion of the main body is used as the direct current power source terminal [the examiner notes that the definitions of "integral", as given by MSN Encarta, do not constitute *permanent attachment or non-detachable*- see MSN Encarta online dictionary printout attached].

With respect to Claim 7, Lin teaches that the charging electric circuit has an AC/DC converter [Fig. 3 regulating circuitry 21 in conjunction with DC circuitry 22 converts AC to DC], a DC/DC converter [Fig. 3 DC circuitry 22 in conjunction with control circuitry 23 and DC output circuitry 24] and an electric circuit displaying a charging state [Fig. 3 DC output circuitry 24 has an LED 1 indicator that displays an output from DC output terminal 242], wherein an input terminal of the AC/DC converter is connected to the alternating current power source terminal, [Fig. 3 terminal 211 connects to an AC supply] an output terminal of the AC/DC converter is connected to an input terminal of the DC/DC converter [Fig. 3 the connection between output of the AC/DC and input to the DC/DC converter occurs after step down transformer ER11-5], the input terminal of the DC/DC converter is connected to the direct current power source terminal [Fig. 3 via DC charging input connector 223] and the cell power source terminal respectively [Fig. 3 both the 9-volt battery and the cigarette adapter plug are connected to charging input connector 223], and an output terminal of the DC/DC converter [Fig. 3 DC output terminal 242] is connected to an input terminal of the electric circuit displaying a charging state [connected to LED 1 via R1].

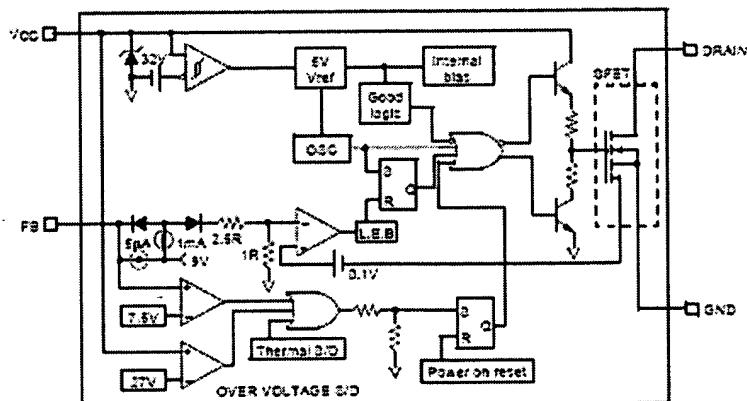
With respect to Claim 8, [amended] Lin teaches the AC/DC converter has a rectifier [Fig. 3 full bridge rectifier 1,2,3,4], an oscillator [Fig. 3, Chip U1 KA5H0165RN from Fairchild Semiconductor has an internal oscillator as shown in the Drawing 1 schematic below], a drop-away voltage transformer [Fig. 3 step down transformer ER11-5] and an output rectifier diode [Fig. 3 D 11], wherein an input terminal of the rectifier is connected to the alternating current power source terminal [Fig. 3 connected

to AC supply terminal 211], an output terminal of the rectifier [Fig. 3 the output between rectifier diodes D1 and D2] is connected to an input terminal of the oscillator [Fig. 3 the output from D1 and D2 is connected through R10 and R11 to VCC of IC Chip U1].

According to Drawing 1 below, the VCC pin connects to the oscillator input], and the oscillator is connected to an input terminal of the DC/DC converter [Fig. 3 DC charging input terminal 223] through the drop-away voltage transformer [Fig. 3 step down transformer ER11-5] and the output rectifier diode [Fig. 3 diode D11].



Internal Block Diagram



DRAWING 1: Chip U1 KA5H0165RN from Fairchild Semiconductor showing an internal oscillator connected to Vcc.

With respect to Claim 9, [amended] Lin teaches the DC/DC converter 7 has an integrated circuit IC [Fig. 3 IC Chip MC34063A], an inductor L [Fig. 3 inductor L1], a

Art Unit: 2838

diode D1 [Fig. 3 diode D22], an output resistor R9 [Fig. 3 resistor R29], a first filter capacitor E1 [Fig. 3 capacitor C22] and a second filter capacitor E2 [Fig. 3 capacitor C23], wherein the integrated circuit IC has a fist pin, a second pin, a third pin, a fourth pin, a fifth pin, a sixth pin, a seventh pin and an eighth pin [Fig. 3 the IC Chip U2 has 8 pins], the sixth pin of the integrated circuit [using standardized pin count as shown in U1, pin 6 is the one shown connected to C21] is connected to the direct current power source terminal [Fig. 3, the DC charging input connector 223 is shown connected through diode D23 to resistor R29, which is connected to transistor D1, through diode D22, through capacitor C21 and into pin 6 of IC Chip U2] and the second filter capacitor [Fig. 3, also connected to filter capacitor C23], the second pin of the integrated circuit [Fig. 3, Chip U2 pin labeled I_pk] is connected to the inductor [Fig. 3 inductor L1] and the diode [Fig. 3 diode D22], the inductor is connected to the output resistor [Fig. 3 output resistor R29 connects to inductor L1], and a charging electricity output terminal [Fig. 3 DC output terminal 242] is connected to the output resistor [Fig. 3 resistor R29] and the first filter capacitor [Fig. 3 capacitor C22].

With respect to Claim 10, [amended] Lin teaches the electric circuit displaying a charging state has a triode [Fig. 3 BJT transistor D1; triodes have largely become obsolete and have been replaced by transistors, such as the BJT transistors depicted as applicant's triode in Fig. 12, V2 and V3], a twin light emitting diode [Fig. 3 LED 1 is depicted as a single LED, but a twin LED could just as easily be used instead for purposes of brighter illumination, without any circuit modification], a second diode [Fig. 3 diode D 22] and a current-limiting resistor [Fig. 3 resistor R1], wherein a base of the

triode is connected to the charging electricity output terminal [Fig. 3, the base of transistor D1 is connected to DC output terminal 242 through resistor R3], an emitter of the triode is connected to the second diode and the output resistor of the DC/DC converter [Fig. 3 the emitter, going through chip U2, is connected to diode D22 and output resistor R29], a collector of the triode is connected to the twin light emitting diode [Fig. 3 the collector of transistor D1 is connected to LED 1 through inductor L1 and resistor R1], and the twin light emitting diode is connected to the second diode [Fig. 3 diode D22] and the current-limiting resistor [Fig. 3 current limiting resistor R1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [U.S. 2002/0154527], with Tortola [U.S. 5160879] in the alternative as noted above, in view of Wu [U.S. 2004/0036442].

With respect to Claim 4, [amended] Lin teaches the charger as claimed in claim 3, but does not teach that the cigarette adapter has a built-in cover.

Wu teaches a cigarette adapter battery charger wherein the main body [Fig. 3 base 3] has a slide channel [Fig. 3, the slide channel formed in wing board 37], and the charger further comprises a rear cover [Fig. 3 cigarette adapter cover 6] removably

Art Unit: 2838

mounted on the cigarette ignition plug to cover the cigarette plug and having a click fastener device [Fig. 5 cavity 382 on the main body engages protuberances 63], and a connector connected between the main body and the rear cover [Fig. 5, when the cover is engaged with base 3, wing boards 61 is the connector between the main body and the cover] and having a first end provided with a distal shaft [Fig. 3 shielding plate 62] to engage the slide channel the main body [wing boards 61 engage the slide channels of wing board 37] and a second end provided with an end notch [Fig. 5 cavity 382] to engage the click fastener device of the rear cover.

Lin and Wu are analogous chargers supplied through cigarette adapters. It would have been obvious to one of ordinary skill in the art at the time of the invention to add an attached cover to the existing cigarette adapter prong, as taught by Wu, for the benefit of protecting the contacts of the prong from dust, moisture, and/or damage [for example, the cigarette prong could fall on the floor of the vehicle where it could be stepped on]. An attached cover further offers the benefit of not inadvertently misplacing the cover when the cigarette adapter is in use.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [U.S. 2002/0154527] in view of Tortola [U.S. 5160879].

With respect to Claims 5 and 6, [amended] Lin teaches a cell removably disposed in the cell chamber [Fig. 1 terminal 223 connects to the 9 volt battery 221 which will be partially disposed inside the cell chamber when connected]. Lin does not

Art Unit: 2838

teach a fully hidden battery inside the cell chamber, or a cover to cover the cell chamber completely.

Tortola teaches a battery charger/battery containing power pack with a removable battery [Fig. 5 battery 48] fully hidden inside a cell chamber, and a cover [Fig. 2 top cover 12] that covers the cell chamber completely.

Lin and Tortola are analogous battery charger adapters that supply power to electronic devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lin by placing Lin's own disclosed exterior 9-volt battery on the inside of charging enclosure 1 [Lin Fig. 1], and to include with it a cover, as taught by Tortola, for the benefit of enclosing the battery into a protective housing to keep it safe from dust, moisture, and accidental damage.

Response to Arguments

Applicant's arguments filed 7/17/2006 have been fully considered but they are not persuasive for the following reasons:

Applicant argues on page 7 of **REMARKS/ARGUMENTS** that Lin [U.S. 2002/0154527] does not teach applicant's amended limitations: "the alternating current power source terminal, the direct current power source terminal, and the cell power source terminal are integrated on the main body." As responded to in claim 1: Lin teaches an alternating current power source terminal [Fig. 1 AC prong 211 supplying AC], a direct current power source terminal [Fig. 1 the right side terminal of the two terminals indicated by input connector 223], and a cell power source terminal [Fig. 1 the left side terminal of the two terminals indicated by input connector 223]. The integration of these three terminals onto the main body is evident from Fig. 1.

Applicant argues on page 7 that battery 221 and cigarette lighter 222 are not connected to a corresponding terminal of the charging electric circuit of the enclosure 1 independently and respectively. As responded to in claim 1: battery 221 is connected to the *left side terminal* of the two terminals indicated by input connector 223, and the cigarette lighter 222 is connected to the *right side terminal* of the two terminals indicated by input connector 223. The right and left terminals are two separate terminals.

Applicant argues on page 7 that Tortola [U.S. 5160879] does not have a dc power source terminal. Lin, not Tortola, provides the dc power source terminal. Tortola is used to meet the limitation of an *interior battery*, instead of Lin's disclosed exterior battery.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal. If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

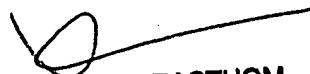
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard V. Muralidar whose telephone number is 571-272-8933. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RVM
10/12/2006



KARL EASTHOM
SUPERVISORY PATENT EXAMINER